Ontario

Ministry of Health and Long-Term Care
Public Health Division

# Ontario Influenza Bulletin
# 2005-2006 Season

## SURVEILLANCE WEEK 2 (January 8 to 14, 2006)

This issue of the Ontario Influenza Bulletin provides information on the surveillance period from January 8 to 14, 2006. The analysis for this issue occurred on Thursday January 19th, therefore all data is current to that date.

During week 2 of 2006, influenza activity remained similar to that of the previous week. Four sporadically occurring cases of influenza were reported through iPHIS, and one institutional outbreak attributed to influenza A was reported. The highest level of current influenza activity in Ontario still remains at 'localized activity', reported in Eastern, Central East and Southwest regions.

For a definition of influenza-like illness (ILI) activity levels and links to websites providing current influenza information from other sources, please refer to the attached Appendix. If you would like to provide feedback on the Bulletin, please contact Shafiq Chowdhury (shafiq.chowdhury@moh.gov.on.ca, 416-327-7807) or Anne-Luise Winter (anne-luise.winter@moh.gov.on.ca, 416-327-7301).

**Table 1:** Summary of laboratory-confirmed influenza cases (sporadic) and institutional outbreaks, by health region, January 8 to 14, 2006.

| | HEALTH REGION | | | | | | | TOTAL |
|---|---|---|---|---|---|---|---|---|
| | North West | North East | Eastern | Central East | Toronto | South West | Central West | |
| **Lab-confirmed Influenza cases*** | | | | | | | | |
| Influenza A | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 |
| Influenza B | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 |
| Unspecified † | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 2 |
| ***Total new cases*** | ***0*** | ***0*** | ***1*** | ***1*** | ***0*** | ***1*** | ***1*** | ***4*** |
| **Institutional influenza outbreaks‡** | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 |

**SOURCE:** MOHLTC [iPHIS, Health Unit Reports to PHD, Provincial Appendix D and Appendix E Database]
* Includes reports of sporadically occurring influenza through iPHIS, as well as cases in institutional outbreaks, with dates of onset in the surveillance period.
† Type of influenza, i.e. A vs B, was not specified in iPHIS (i.e. Influenza subtype dropdown menu left blank or reported as "Unspecified").
‡ Laboratory-confirmed outbreaks in institutions during the surveillance period.

**Table 2:** Confirmed* cases of influenza by health unit & health region, with an episode date† between January 8 to 14, 2006.

| Region | Health Unit | Laboratory-Confirmed Influenza | | | |
|---|---|---|---|---|---|
| | | Influenza A | Influenza B | Unspecified‡ | TOTAL |
| North West | Northwestern | 0 | 0 | 0 | 0 |
| | Thunder Bay District | 0 | 0 | 0 | 0 |
| | **TOTAL NORTH WEST** | **0** | **0** | **0** | **0** |
| North East | Algoma | 0 | 0 | 0 | 0 |
| | North Bay Parry Sound District | 0 | 0 | 0 | 0 |
| | Porcupine | 0 | 0 | 0 | 0 |
| | Sudbury & District | 0 | 0 | 0 | 0 |
| | Timiskaming | 0 | 0 | 0 | 0 |
| | **TOTAL NORTH EAST** | **0** | **0** | **0** | **0** |
| Eastern | Eastern Ontario | 0 | 0 | 0 | 0 |
| | Hastings & Prince Edward Counties | 0 | 0 | 0 | 0 |
| | Kingston, Frontenac, Lennox & Addington | 0 | 0 | 0 | 0 |
| | Leeds, Grenville & Lanark | 0 | 0 | 1 | 1 |
| | Ottawa | 0 | 0 | 0 | 0 |
| | Renfrew | 0 | 0 | 0 | 0 |
| | **TOTAL EASTERN** | **0** | **0** | **1** | **1** |
| Central East | Durham Region | 0 | 0 | 0 | 0 |
| | Haliburton, Kawartha, Pine Ridge District | 0 | 0 | 0 | 0 |
| | Peterborough County-City | 0 | 0 | 1 | 1 |
| | Simcoe Muskoka District | 0 | 0 | 0 | 0 |
| | York Region | 0 | 0 | 0 | 0 |
| | Peel Region | 0 | 0 | 0 | 0 |
| | **TOTAL CENTRAL EAST** | **0** | **0** | **1** | **1** |
| Toronto | Toronto | 0 | 0 | 0 | 0 |
| | **TOTAL TORONTO** | **0** | **0** | **0** | **0** |
| South West | Grey-Bruce | 0 | 0 | 0 | 0 |
| | Elgin-St. Thomas | 1 | 0 | 0 | 1 |
| | Huron County | 0 | 0 | 0 | 0 |
| | Chatham-Kent | 0 | 0 | 0 | 0 |
| | Lambton | 0 | 0 | 0 | 0 |
| | Middlesex-London | 0 | 0 | 0 | 0 |
| | Oxford | 0 | 0 | 0 | 0 |
| | Perth District | 0 | 0 | 0 | 0 |
| | Windsor-Essex County | 0 | 0 | 0 | 0 |
| | **TOTAL SOUTHWEST** | **1** | **0** | **0** | **1** |
| Central West | Brant | 0 | 0 | 0 | 0 |
| | Haldimand-Norfolk | 0 | 1 | 0 | 1 |
| | Hamilton | 0 | 0 | 0 | 0 |
| | Niagara Region | 0 | 0 | 0 | 0 |
| | Halton Region | 0 | 0 | 0 | 0 |
| | Waterloo Region | 0 | 0 | 0 | 0 |
| | Wellington-Dufferin-Guelph | 0 | 0 | 0 | 0 |
| | **TOTAL CENTRAL WEST** | **0** | **1** | **0** | **1** |
| | ***TOTAL ONTARIO*** | ***1*** | ***1*** | ***2*** | ***4*** |

**SOURCE**: MOHLTC [iPHIS, Health Unit Reports to PHD]

* Confirmed cases of influenza can include laboratory-confirmed cases and epi-linked cases.

† The episode date corresponds to symptom onset date.

‡ Type of influenza, i.e. A vs B, was not specified in iPHIS (i.e. Influenza subtype dropdown menu left blank or reported as unspecified)

**Table 3:** Cumulative* confirmed† cases of influenza by health unit & health region, September 1, 2005 to January 14, 2006.

| Region | Health Unit | Laboratory-Confirmed influenza | | | |
|---|---|---|---|---|---|
| | | Influenza A | Influenza B | Unspecified‡ | TOTAL |
| North West | Northwestern | 0 | 0 | 0 | 0 |
| | Thunder Bay District | 0 | 0 | 0 | 0 |
| | **TOTAL NORTH WEST** | **0** | **0** | **0** | **0** |
| North East | Algoma | 0 | 0 | 0 | 0 |
| | North Bay Parry Sound District | 0 | 0 | 0 | 0 |
| | Porcupine | 0 | 1 | 0 | 1 |
| | Sudbury & District | 0 | 0 | 0 | 0 |
| | Timiskaming | 0 | 0 | 0 | 0 |
| | **TOTAL NORTH EAST** | **0** | **1** | **0** | **1** |
| Eastern | Eastern Ontario | 0 | 0 | 0 | 0 |
| | Hastings & Prince Edward Counties | 0 | 0 | 0 | 0 |
| | Kingston, Frontenac, Lennox & Addington | 0 | 0 | 1 | 1 |
| | Leeds, Grenville & Lanark | 0 | 0 | 2 | 2 |
| | Ottawa | 1 | 0 | 0 | 1 |
| | Renfrew | 0 | 0 | 0 | 0 |
| | **TOTAL EASTERN** | **1** | **0** | **3** | **4** |
| Central East | Durham Region | 0 | 0 | 0 | 0 |
| | Haliburton, Kawartha, Pine Ridge District | 2 | 0 | 0 | 2 |
| | Peterborough County-City | 0 | 0 | 1 | 1 |
| | Simcoe Muskoka District | 3 | 0 | 0 | 3 |
| | York Region | 0 | 1 | 0 | 1 |
| | Peel Region | 1 | 0 | 0 | 1 |
| | **TOTAL CENTRAL EAST** | **6** | **1** | **1** | **8** |
| Toronto | Toronto | 4 | 0 | 0 | 4 |
| | **TOTAL TORONTO** | **4** | **0** | **0** | **4** |
| South West | Grey-Bruce | 0 | 0 | 0 | 0 |
| | Elgin-St. Thomas | 1 | 0 | 0 | 1 |
| | Huron County | 2 | 0 | 0 | 2 |
| | Chatham-Kent | 0 | 0 | 1 | 1 |
| | Lambton | 0 | 0 | 0 | 0 |
| | Middlesex-London | 0 | 1 | 0 | 1 |
| | Oxford | 0 | 0 | 0 | 0 |
| | Perth District | 1 | 0 | 0 | 1 |
| | Windsor-Essex County | 0 | 0 | 0 | 0 |
| | **TOTAL SOUTHWEST** | **4** | **1** | **1** | **6** |
| Central West | Brant | 0 | 0 | 0 | 0 |
| | Haldimand-Norfolk | 0 | 0 | 0 | 0 |
| | Hamilton | 3 | 2 | 0 | 5 |
| | Niagara Region | 0 | 0 | 1 | 1 |
| | Halton Region | 3 | 0 | 0 | 3 |
| | Waterloo Region | 3 | 0 | 0 | 3 |
| | Wellington-Dufferin-Guelph | 0 | 0 | 0 | 0 |
| | **TOTAL CENTRAL WEST** | **9** | **2** | **1** | **12** |
| | ***TOTAL ONTARIO*** | **24** | **5** | **6** | **35** |

**SOURCE** MOHLTC [iPHIS, Health Unit Reports to PHD]

* Cumulative case counts include late reports and records that are otherwise reconciled. Therefore, cumulative counts may not equal new cases plus previous cumulative value.

† Confirmed cases of influenza can include laboratory-confirmed cases and epi-linked cases.

‡ Type of influenza, i.e. A vs B, was not specified in iPHIS (i.e. Influenza subtype dropdown menu left blank or reported as unspecified)

**Influenza Subtype(s)*:**

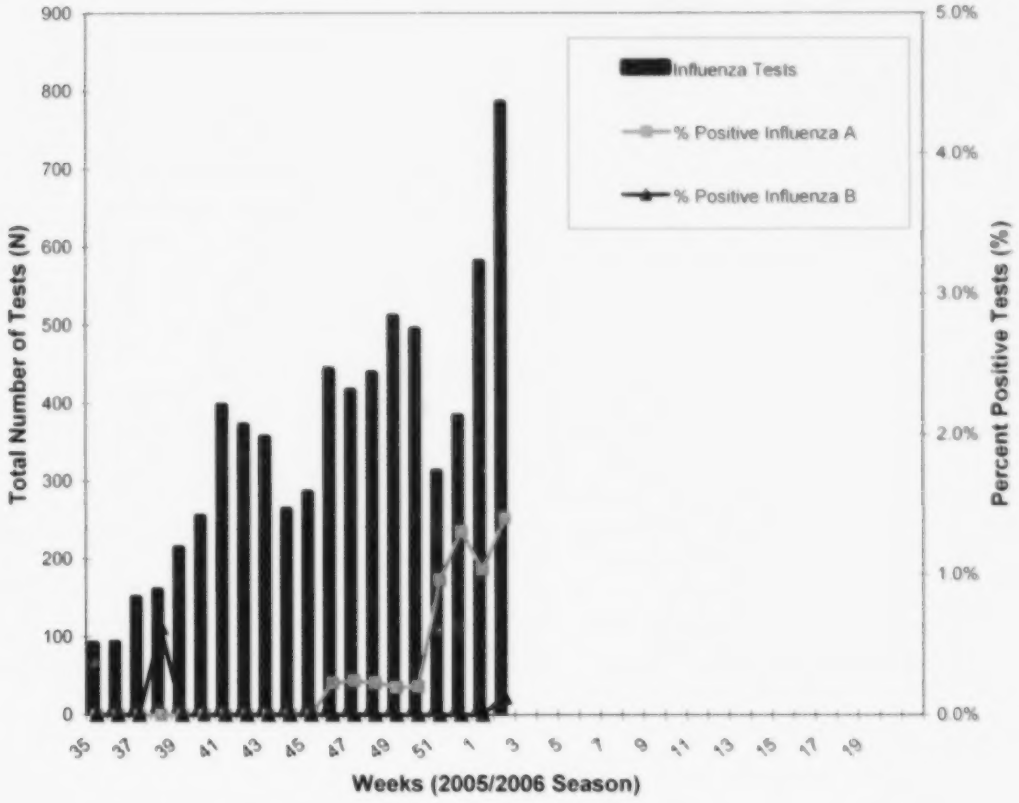
During Week 2, 2,552 influenza tests were conducted across Canada, with a total of 34 influenza A and 39 influenza B isolates testing positive. The majority of the influenza A isolates were from Ontario 11(33.3%), British Columbia 10 (29.4%) and Alberta 9(26.5%). Most of the influenza B isolates 36 (92.3%) were in Alberta.

Since the start of the 2005-2006 influenza season, the National Microbiology Laboratory (NML) has antigenically characterized 77 influenza viruses; 40 A/California/07/2004(H3N2)-like viruses (24 in British Columbia, 4 in Alberta, 3 in Saskatchewan & 9 in Ontario), 34 B/Hong Kong/330/2001-like viruses (1 in the Yukon,1 in British Columbia, 29 in Alberta, 2 in Saskatchewan & 1 in Ontario) belonging to the B/Victoria/2/1987 lineage, and 3 B/Shanghai/361/2002-like viruses (British Columbia, Alberta & Ontario ) belonging to the B/Yamagata/16/1988 lineage.

Note: The 2005-2006 season Canadian vaccine contains an A/New Caledonia/20/1999(H1N1)-like, an A/California/7/2004(H3N2)-like, and a B/Shanghai/361/2002-like virus strain.

* These data have been obtained from Public Health Agency of Canada, and their Flu Watch report of January 1-7, 2006

**Figure 1**: Total number of influenza tests performed and percent of positive tests in Ontario reported to the Centre for Infectious Disease Prevention and Control (CIDPC), by report week*.




**Source:** Public Health Agency of Canada

* Total numbers reported include late reports; therefore totals may not be equal to the sum of the weekly numbers.

Note: Cumulative numbers for season to date are available through FluWatch:
http://www.phac-aspc.gc.ca/fluwatch/

**Table 4:** Institutional respiratory outbreaks in Ontario, September 1, 2005 to January 14, 2006

**Institutional Respiratory Infection Outbreaks**

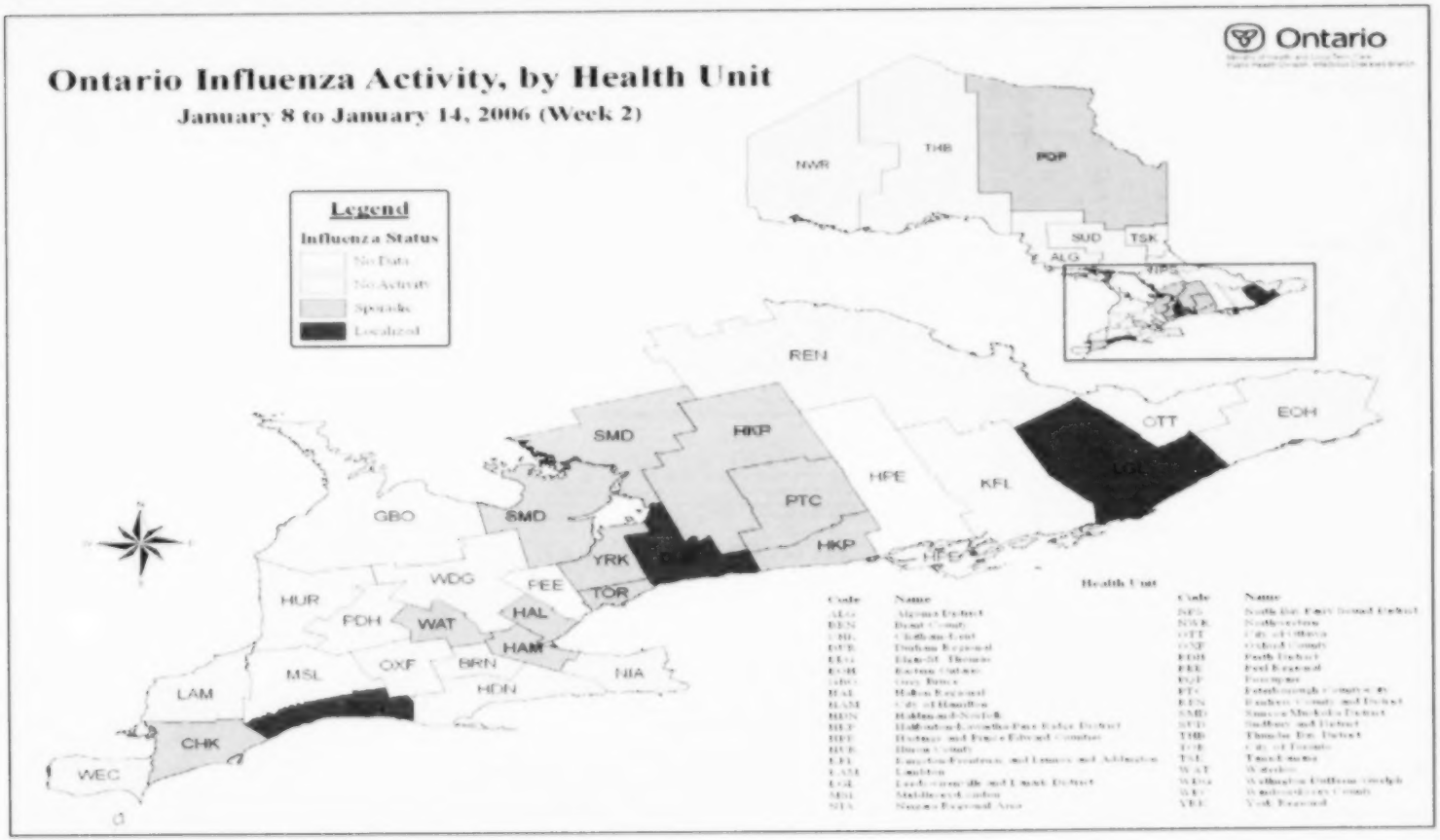
| **New Outbreaks*** | **N** | **% (of outbreaks)** |
|---|---|---|
| Influenza A | 1 | 6.7 |
| Influenza B | 0 | 0 |
| Influenza A and B | 0 | 0 |
| Parainfluenza (All types) | 0 | 0 |
| Other organisms | 0 | 0 |
| No organism identified | 14 | 93.3 |
| ***TOTAL*** | ***15*** | ***100*** |
| **Total Respiratory Infection Outbreaks, Season to Date**** | **N** | **% (of outbreaks)** |
| Influenza A | 4 | 1.5 |
| Influenza B | 0 | 0 |
| Influenza A and B | 0 | 0 |
| Parainfluenza (All types) | 21 | 7.9 |
| Other organisms | 47 | 17.8 |
| No organism identified | 172 | 72.8 |
| ***TOTAL*** | ***265*** | ***100*** |
| **Types of Institutions (All Outbreaks)** | **N** | **% (of outbreaks)** |
| Long-Term Care Homes | 226 | 85.3 |
| Hospitals | 10 | 3.8 |
| Retirement Homes | 27 | 10.2 |
| Other | 2 | 0.7 |
| ***TOTAL*** | ***265*** | ***100*** |
| **Outbreak Related Complications (All Outbreaks)** | **N** | **% (of cases)** |
| ***Deaths*** | | |
| Residents | 83 | 2.7 |
| Staff | 0 | 0 |
| ***Pneumonia (Chest x-ray confirmed)*** | | |
| Residents | 141 | 4.6 |
| Staff | 8 | 0.9 |
| ***Hospitalizations*** | | |
| Residents | 176 | 5.7 |
| Staff | 2 | 0.2 |

**SOURCE:** MOHLTC [Provincial Appendix D and Appendix E Database]

** Season to date includes all outbreaks in which the date of onset of the first case occurred between September 1, 2005 and January 14 2006.

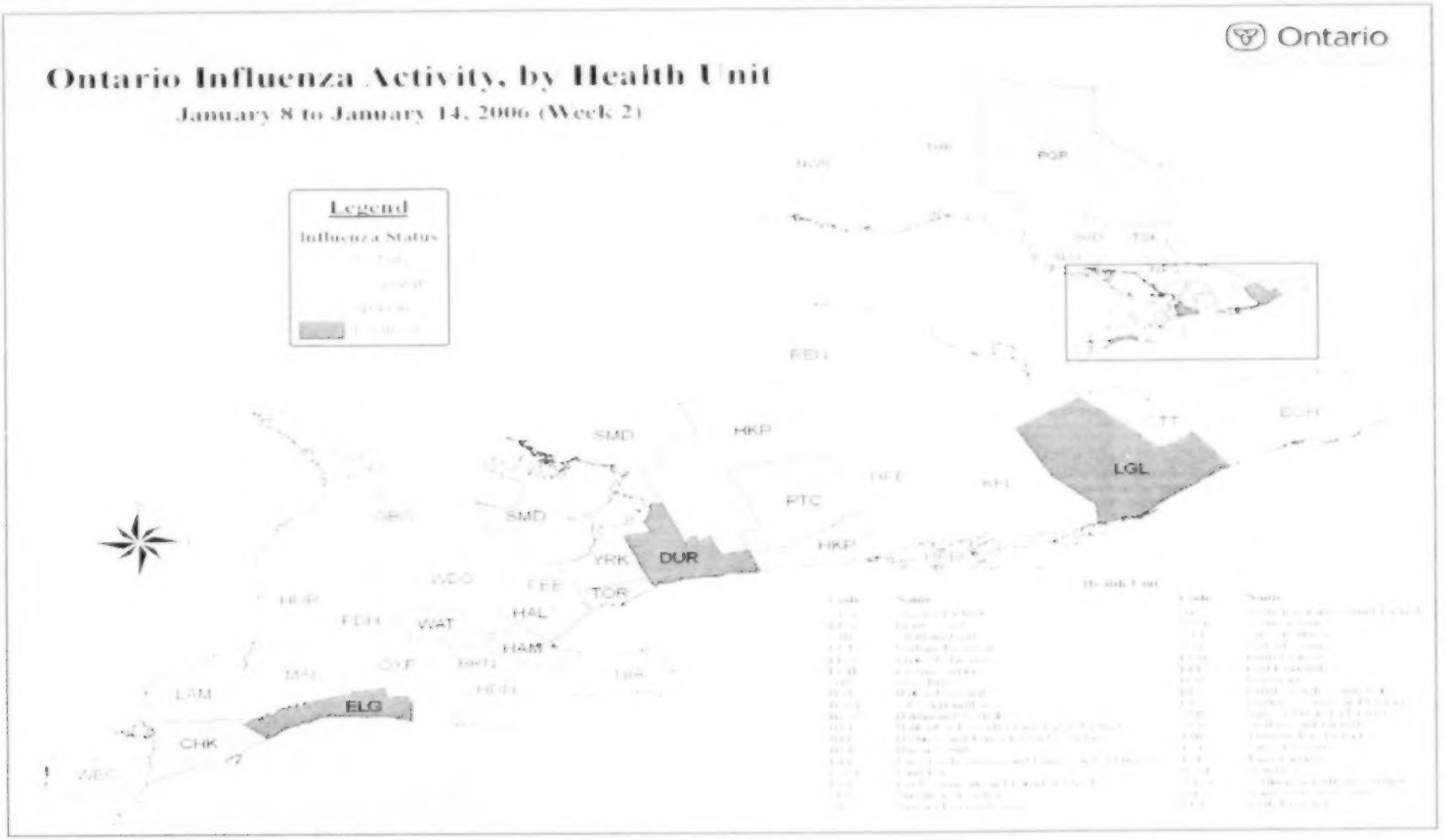
* New outbreaks are those in which the date of onset of the first case occurred in the surveillance period (January 8 to 14, 2006).

**Figure 2: Influenza activity* in Ontario by health unit, (January 8 to 14, 2006).**



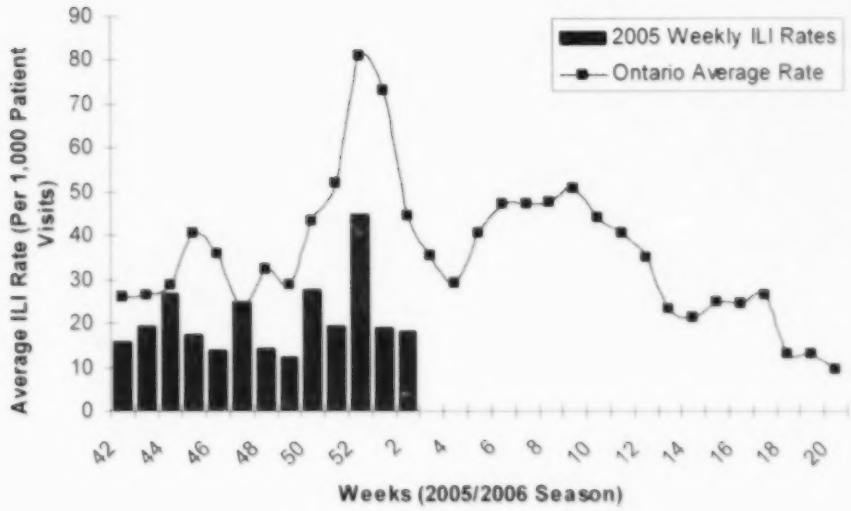

**SOURCE**: MOHLTC [Provincial Influenza Activity Report (Appendix C) Database]
* Influenza activity levels, as represented on this map, are assigned by local public health units and reported to the MOHLTC by the Tuesday following the end of the surveillance week at 4 pm. Activity levels are assigned based on laboratory confirmations, ILI reports from various sources, and laboratory-confirmed institutional outbreaks. Please refer to detailed definitions for the 2005-2006 season included in the Appendix.

**Figure 2: Influenza activity * in Ontario by health unit. (January 8 to 14, 2006).**




**SOURCE:** MOHLTC [Provincial Influenza Activity Report (Appendix C) Database]
* Influenza activity levels, as represented on this map, are assigned by local public health units and reported to the MOHLTC by the Tuesday following the end of the surveillance week at 4 pm. Activity levels are assigned based on laboratory confirmations, ILI reports from various sources, and laboratory-confirmed institutional outbreaks. Please refer to detailed definitions for the 2005-2006 season included in the Appendix.

**Figure 3:** Average influenza-like illness rate (per 1,000 patient visits) reported by sentinel physicians* in Ontario, by report week, compared to Ontario average† (1996/96 to 2004/05 seasons).




**Source**: Public Health Agency of Canada
* Sentinel physician information is reported to Public Health Agency of Canada.
†No data available for mean rate in previous years for weeks 21 to 39 (1996-1997 through 2002-2003 seasons). During weeks 20-39, 2002-2003/2004-2005 seasons, ILI is reported once every two weeks, on even weeks only.

**Table 5**: Average Influenza-like illness rate (per 1,000 patient visits) reported by sentinel physicians* in Ontario, by age group and postal code.

| Postal Code | 0 – 4 | 5 – 19 | 20 – 64 | 65 + | Unknown |
|---|---|---|---|---|---|
| K0C1A0 | 0 | 0 | 0 | 0 | 0 |
| K1J9M2 | 0 | 0 | 0 | 0 | 0 |
| K2P1V3 | 0 | 0 | 1 | 0 | 0 |
| K7H2W6 | 0 | 0 | 0 | 0 | 0 |
| K7L1E9 | 0 | 0 | 0 | 0 | 0 |
| K0L1C0 | 0 | 0 | 0 | 0 | 0 |
| K0L1H0 | 0 | 0 | 0 | 0 | 0 |
| K0M1A0 | 0 | 0 | 0 | 0 | 0 |
| L1B1H8 | 0 | 0 | 0 | 0 | 0 |
| L4J7Y3 | 0 | 0 | 0 | 0 | 0 |
| L4G3W3 | 0 | 0 | 0 | 0 | 0 |
| M5M1B2 | 0 | 0 | 2 | 0 | 0 |
| M4X1W4 | 0 | 0 | 0 | 0 | 0 |
| M6G4A1 | 0 | 0 | 0 | 0 | 0 |
| M4E1V8 | 0 | 1 | 0 | 0 | 0 |
| M4H1C3 | 0 | 0 | 0 | 0 | 0 |
| M8Y1W3 | 0 | 0 | 0 | 0 | 0 |
| M2N6H7 | 0 | 0 | 0 | 0 | 0 |
| M2J2Z1 | 0 | 0 | 0 | 0 | 0 |
| M2J2Z1 | 0 | 0 | 0 | 0 | 0 |
| M3H1T1 | 0 | 1 | 0 | 0 | 0 |
| M2K1E1 | 0 | 0 | 0 | 0 | 0 |
| M9W6N5 | 0 | 0 | 0 | 0 | 0 |
| M9W4L6 | 0 | 0 | 0 | 0 | 0 |
| M8V2Z5 | 0 | 0 | 0 | 0 | 0 |
| L5G3H5 | 0 | 0 | 1 | 0 | 0 |
| L4Y2N8 | 0 | 0 | 0 | 0 | 0 |
| L8V4H6 | 0 | 0 | 2 | 0 | 0 |
| L9W1G2 | 0 | 0 | 0 | 1 | 0 |
| L7R1M6 | 0 | 1 | 0 | 0 | 0 |
| L9H1V1 | 0 | 0 | 0 | 0 | 0 |
| L9H2G2 | 0 | 0 | 2 | 0 | 0 |
| L0R1H0 | 0 | 0 | 0 | 0 | 0 |
| L2E1Y3 | 0 | 0 | 0 | 0 | 0 |
| L0R1B0 | 1 | 1 | 6 | 1 | 0 |
| N3C2E2 | 0 | 0 | 1 | 0 | 0 |
| N2G1P2 | 0 | 0 | 0 | 0 | 0 |
| N2M3B5 | 0 | 0 | 0 | 0 | 0 |
| N4W1P9 | 0 | 0 | 0 | 0 | 0 |
| N5H1K9 | 0 | 0 | 0 | 0 | 0 |
| N0R1G0 | 0 | 0 | 0 | 0 | 0 |
| N8X2G3 | 0 | 1 | 3 | 0 | 0 |
| N0M1T0 | 0 | 0 | 0 | 0 | 0 |
| N6C2R5 | 0 | 0 | 0 | 0 | 0 |
| N0M1L0 | 0 | 0 | 0 | 0 | 0 |
| N0C1E0 | 0 | 0 | 0 | 0 | 0 |
| K0J1B0 | 0 | 0 | 0 | 1 | 0 |
| P0H2H0 | 0 | 0 | 0 | 0 | 0 |
| P0A1C0 | 0 | 0 | 0 | 0 | 0 |
| P0P1S0 | 0 | 0 | 0 | 0 | 0 |
| P3E5V5 | 0 | 0 | 0 | 0 | 0 |
| P4N1C6 | 0 | 0 | 0 | 0 | 0 |
| P6B1Y5 | 0 | 0 | 0 | 0 | 0 |
| P7E1H5 | 0 | 0 | 0 | 0 | 0 |
| P0T2E0 | 0 | 0 | 0 | 0 | 0 |
| P0W1E0 | 0 | 0 | 0 | 0 | 0 |
| P9N3W7 | 0 | 0 | 0 | 0 | 0 |
| **ILI Sum** | 1 | 5 | 18 | 3 | 0 |
| ***ILI Rate (per 1,000 patient visits)*** | 8.55 | 42.37 | 21.92 | 6.77 | 0.00 |

**Source**: Public Health Agency of Canada
* Sentinel physician information is reported to the Public Health Agency of Canada
**Note**: The small numbers of sentinel physicians reporting at the local level make the ILI rates unstable. Please interpret these data correspondingly.

## Incidence of adamantane resistance among influenza A (H3N2) viruses isolated worldwide from 1994 to 2005: a cause for concern

| | 1995* | % | 1996 | % | 1997 | % | 1998 | % | 1999 | % | 2000 | % | 2001 | % | 2002 | % | 2003 | % | 2004 | % | 2005† | % |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Africa | | | | | | | | | | | | | | | | | | | | | | |
| Egypt | | | | | | | | | 0/3 | | 1/7 | | | | 0/1 | | 0/8 | | 0/6 | | | |
| Madagascar | | | | | | | | | | | | | | | 0/5 | | | | | | | |
| Senegal | | | | | | | 0/2 | | | | | | | | | | 0/1 | | | | | |
| South Africa | 0/4 | | 0/4 | | 0/3 | | 0/2 | | 0/2 | | 0/3 | | | | | | | | 0/2 | | | |
| Total Africa | 0/4‡ | | 0/4 | | 0/3 | | 0/4 | | 0/5 | | 1/10 | | | | 0/6 | | 0/9 | | 0/8 | | | |
| Asia | | | | | | | | | | | | | | | | | | | | | | |
| Bangladesh | | | | | | | | | | | | | | | | | 0/5 | | 0/1 | | | |
| China | 0/37 | | 1/96 | 1·0 | 0/38 | | 2/109 | 1·8 | 2/65 | 3·1 | 1/16 | | 1/13 | | 5/61 | 8·2 | 59/87 | 57·5 | 93/126 | 73·8 | | |
| Guam | 0/6 | | 0/12 | | 0/11 | | 0/12 | | 0/6 | | 0/1 | | 0/1 | | 0/4 | | 0/3 | | 0/13 | | | |
| Hong Kong (SAR) | 0/6 | | 0/9 | | 0/11 | | 0/57 | | 0/11 | | 0/18 | | 0/21 | | 0/13 | | 17/93 | 18·3 | 16/23 | 69·6 | | |
| India | | | 0/2 | | | | | | 0/2 | | 0/4 | | | | 0/1 | | 0/1 | | | | | |
| Indonesia | | | | | | | | | | | | | | | | | 0/1 | | 0/5 | | | |
| Iran | | | | | | | | | | | 0/1 | | | | | | | | | | | |
| Iraq | | | | | | | | | | | | | | | | | | | | | | |
| Japan | 0/14 | | 0/18 | | 0/12 | | 1/26 | 3·8 | 0/4 | | 0/28 | | 0/6 | | 0/28 | | 0/37 | | 2/47 | 4·3 | | |
| South Korea | 1/18 | | 0/13 | | 0/7 | | 1/68 | 1·5 | 0/10 | | 0/5 | | 0/30 | | 0/13 | | 3/40 | 7·5 | 8/53 | 15·1 | | |
| Kyrgyzstan | | | | | | | | | | | | | | | | | | | 0/4 | | | |
| Macao | | | | | 0/2 | | | | | | | | | | | | | | 1/2 | | | |
| Malaysia | | | | | | | 0/1 | | 0/1 | | | | | | | | 0/1 | | 0/3 | | | |
| Nepal | | | | | | | 2/15 | | 0/2 | | 0/2 | | 0/6 | | | | | | 0/28 | | | |
| Philippines | | | | | | | | | 0/4 | | 0/1 | | 0/2 | | 0/13 | | | | | | | |
| Oman | | | | | | | | | | | | | | | | | 0/1 | | | | | |
| Qatar | | | | | | | | | | | | | | | | | | | 0/9 | | | |
| Saudi Arabia | | | | | | | | | | | | | | | | | 0/1 | | 0/1 | | | |
| Singapore | 0/7 | | 0/3 | | 0/11 | | 1/12 | | 0/7 | | 0/3 | | 0/7 | | 0/3 | | 0/8 | | 0/54 | | | |
| Syria | | | | | 0/3 | | | | | | 0/2 | | | | | | | | | | | |
| Taiwan | 0/1 | | 0/1 | | 0/4 | | 0/4 | | 0/11 | | 0/5 | | 1/10 | | 0/5 | | 6/10 | | 5/22 | 22·7 | | |
| Thailand | 0/2 | | 0/9 | | 1/22 | 4·5 | 0/4 | | 0/3 | | 0/1 | | 0/11 | | 0/14 | | 0/23 | | 2/64 | 3·1 | | |
| Turkey | | | 0/1 | | | | 1/4 | | | | | | | | | | 0/2 | | 0/1 | | | |
| Vietnam | | | | | | | | | | | | | 0/2 | | | | | | 0/15 | | | |
| Total Asia | 1/91 | 1·1 | 1/264 | 0·6 | 1/121 | 0·8 | 8/312 | 2·6 | 2/126 | 1·6 | 1/87 | 1·1 | 2/109 | 1·8 | 5/155 | 3·2 | 79/313 | 24·3 | 127/471 | 27·0 | | |
| Europe | | | | | | | | | | | | | | | | | | | | | | |
| Bulgaria | 0/2 | | 0/4 | | | | 0/5 | | | | 1/2 | | | | | | 0/8 | | 0/1 | | | |
| Czechoslovakia | | | | | 0/1 | | | | | | | | | | | | | | | | | |
| Cyprus | | | | | | | | | | | 0/1 | | | | | | | | | | | |
| France | 0/3 | | 0/16 | | 0/21 | | 0/14 | | | | 0/1 | | 0/5 | | 0/3 | | 0/1 | | 1/16 | | | |
| Germany | 0/6 | | 0/9 | | 1/6 | | 0/16 | | | | 0/2 | | | | | | | | 0/19 | | | |
| Greece | | | | | | | | | | | 0/1 | | | | | | | | | | | |
| Hungary | | | | | | | | | 0/1 | | | | | | | | | | | | | |
| Italy | | | | | 0/1 | | | | | | | | | | 0/1 | | 0/4 | | 1/7 | | | |
| Lithuania | | | | | | | | | | | | | | | | | | | | | | |
| Netherlands | 0/4 | | 0/4 | | 0/2 | | 0/3 | | | | | | | | | | | | | | | |
| Norway | | | | | | | | | | | | | | | | | | | 0/1 | | | |
| Poland | | | | | 0/1 | | | | | | | | | | | | | | | | | |
| Romania | | | | | | | 0/2 | | | | 0/19 | | | | | | | | 0/4 | | | |
| Russia | | | 0/2 | | 1/3 | | 1/11 | | | | 1/21 | 4·8 | | | 0/4 | | 0/11 | | 2/25 | 8·0 | | |
| Spain | 0/12 | | 0/24 | | | | | | | | | | | | | | | | | | | |
| Sweden | 0/4 | | | | | | | | | | | | | | | | | | | | | |
| Switzerland | | | | | | | | | | | | | | | | | | | | | | |
| Ukraine | | | | | | | | | | | 0/5 | | | | | | | | 0/1 | | | |
| United Kingdom | 0/8 | | 0/10 | | 0/2 | | 0/5 | | 0/3 | | 0/4 | | | | 0/2 | | 0/7 | | 0/11 | | | |
| Total Europe | 0/39 | | 0/99 | | 2/32 | 5·4 | 1/56 | 1·8 | 0/4 | | 2/56 | 3·6 | 0/5 | | 0/10 | | 0/31 | | 4/85 | 4·7 | | |
| North America | | | | | | | | | | | | | | | | | | | | | | |
| Canada | 0/10 | | 0/9 | | 0/26 | | 2/30 | 6·7 | | | 0/9 | | 0/1 | | 0/8 | | 0/11 | | 6/20 | 30·0 | | |
| Mexico | | | | | | | | | | | | | | | 0/4 | | 0/24 | | 5/26 | 19·2 | | |
| United States | 1/309 | 0·3 | 0/256 | | 2/252 | 0·8 | 8/427 | 1·9 | 5/138 | 3·6 | 4/252 | 1·6 | 0/31 | | 4/290 | 1·4 | 3/174 | 1·7 | 9/466 | 1·9 | 520/36 | 14·5 |
| Total North America | 1/319 | 0·3 | 0/265 | | 2/278 | 0·7 | 10/402 | 2·5 | 5/138 | 3·6 | 4/261 | 1·5 | 0/34 | | 4/302 | 1·3 | 3/209 | 1·4 | 20/512 | 3·9 | | |
| Oceania | | | | | | | | | | | | | | | | | | | | | | |
| Australia | 0/4 | | 1/24 | 4·2 | 0/27 | | 0/29 | | 0/8 | | 0/9 | | 0/5 | | 0/8 | | 0/6 | | 0/12 | | | |
| Fiji | | | 0/6 | | 0/10 | | | | | | | | | | | | | | 0/1 | | | |
| New Caledonia | | | | | | | | | | | | | | | | | | | 0/2 | | | |
| New Zealand | 0/2 | | 0/13 | | 0/3 | | 0/3 | | 0/6 | | 0/2 | | 0/4 | | | | 0/2 | | 0/3 | | | |
| Solomon Island | | | | | | | | | | | | | | | | | | | 0/1 | | | |
| Total Oceania | 0/6 | | 1/43 | 2·3 | 0/40 | | 0/32 | | 0/14 | | 0/11 | | 0/9 | | 0/8 | | 0/8 | | 0/19 | | | |

(Continues)



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MOHTLC
Public Health Division
1/20/2006

(Continued)

| | 1995* | % | 1996 | % | 1997 | % | 1998 | % | 1999 | % | 2000 | % | 2001 | % | 2002 | % | 2003 | % | 2004 | % | 2005† | % |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| South America | | | | | | | | | | | | | | | | | | | | | | |
| Argentina | 0/10 | | 0/15 | | 0/8 | | 1/22 | 4·5 | | | | | 0/8 | | | | | | 2/65 | 3·1 | | |
| Bahamas | | | | | | | | | 0/1 | | | | | | | | | | | | | |
| Bolivia | | | | | | | | | | | | | | | | | 0/7 | | | | | |
| Brazil | 0/9 | | 0/14 | | 1/26 | 3·8 | 0/21 | | 0/1 | | 0/12 | | | | 0/4 | | 0/5 | | 1/17 | | | |
| Chile | 0/1 | | 0/22 | | 1/23 | 4·3 | 0/43 | | 0/22 | | 0/3 | | 0/5 | | | | 0/2 | | 0/14 | | | |
| Colombia | | | | | 0/4 | | 1/10 | | 1/2 | | | | | | | | 0/3 | | 0/9 | | | |
| Costa Rica | | | | | | | | | | | 0/1 | | 0/1 | | | | | | | | | |
| Cuba | | | | | 2/5 | | 2/4 | | | | | | | | | | | | | | | |
| Ecuador | | | | | | | | | | | 0/2 | | | | | | | | 0/3 | | | |
| El Salvador | | | | | | | | | | | | | | | | | | | 0/3 | | | |
| French Guyana | | | | | | | | | 0/7 | | 0/2 | | | | | | | | 0/7 | | | |
| Guadeloupe | | | | | | | | | | | | | | | | | | | 0/1 | | | |
| Guatemala | | | | | | | | | | | | | | | | | | | | | | |
| Jamaica | | | | | | | 0/1 | | | | | | | | | | | | 0/4 | | | |
| Martinique | | | | | | | | | 0/1 | | | | | | | | | | | | | |
| Nicaragua | | | | | | | | | | | | | | | | | | | 0/1 | | | |
| Panama | | | | | | | | | 0/9 | | | | | | | | | | | | | |
| Paraguay | | | | | | | | | | | | | | | | | | | 1/34 | 2·9 | | |
| Peru | | | | | | | 0/2 | | 0/3 | | | | 0/7 | | 0/5 | | 0/8 | | 5/37 | 13·5 | | |
| Trinidad | | | | | | | | | | | | | | | | | | | | | | |
| Uruguay | | | | | 0/1 | | 0/2 | | | | | | 0/1 | | | | | | 0/5 | | | |
| Venezuela | | | | | 0/3 | | 0/1 | | | | | | | | | | | | 0/9 | | | |
| Total South America | 0/20 | | 0/51 | | 4/70 | 5·7 | 4/106 | 3·8 | 1/46 | 2·2 | 0/20 | | 0/22 | | 0/9 | | 0/25 | | 9/209 | 4·3 | | |
| Overall | 2/479 | 0·4 | 2/596 | 0·3 | 9/555 | 1·6 | 23/912 | 2·5 | 6/333 | 1·8 | 8/445 | 1·8 | 2/179 | 1·1 | 9/490 | 1·8 | 79/595 | 13·3 | 160/1304 | 12·3 | | |

*Each year represents the 12-month influenza season starting from October 1 through September 30. †2005 U.S. isolates collected from October 1, 2004 through March 31, 2005. ‡Numbers represent number resistant/number tested, percent resistant when greater than 0 and sample size >20.

**Webtable.** Frequency of resistant H3N2 viruses by geographic origin and year of isolation

## FURTHER INFORMATION

1. Ontario Ministry of Health and Long-Term Care
   Previous issues of the Ontario Influenza Bulletin can be accessed at:
   www.health.gov.on.ca/english/providers/program/pubhealth/flu/flu_04/flubul_mn.html

2. Public Health Agency of Canada
   Issues of FluWatch can be accessed at:
   www.phac-aspc.gc.ca/fluwatch/

3. United States Centers for Disease Control and Prevention
   www.cdc.gov/flu/

## APPENDIX

**Definitions for influenza activity levels:**

**No Data:** No activity report corresponding to the surveillance week was received at the Ministry of Health and Long-Term Care Call Centre by the Tuesday (at 4 p.m.) following the end of the surveillance period.
**No Activity** = No ILI and no laboratory-confirmed cases* or outbreaks occurred.
**Sporadic:** sporadically occurring ILI **AND** laboratory-confirmed influenza* with NO outbreaks detected within the influenza surveillance region†
**Localized:** sporadically occurring ILI **AND** laboratory-confirmed influenza* together with outbreaks of ILI in schools and worksites or laboratory confirmed influenza in residential institutions occurring in less than 50% of the influenza surveillance region(s)
**Widespread:** sporadically occurring ILI **AND** laboratory-confirmed influenza* together with outbreaks of ILI in schools and worksites or laboratory-confirmed influenza in residential institutions occurring in greater than or equal to 50% of the influenza surveillance region(s)

* Confirmation of influenza within the surveillance region at any time within the prior four weeks
† Sub-regions within the province or territory as defined by the provincial/territorial epidemiologist

**Influenza-Like Illness (ILI) Definitions:**

**A) ILI in the general population:**

Acute onset of respiratory illness with fever and cough and with one or more of the following - sore throat, arthralgia, myalgia, or prostration which could be due to influenza virus. In children under 5, gastrointestinal symptoms may also be present. In patients under 5 or 65 and older, fever may not be prominent.

**B) ILI/Influenza outbreaks:**

**Schools and work sites:** greater than 10% absenteeism on any day most likely due to ILI **Residential institutions:** two or more cases of ILI within a seven-day period, including at least one laboratory-confirmed case.